

Rutherford County

*Rutherford County Office Building
289 N. Main Street
Rutherfordton, NC 28139*



Meeting Agenda

Tuesday, July 21, 2015

5:30 PM

Rutherford County Airport Authority

I. Call To Order

II. Pledge of Allegiance

Agenda Approval

III. Public Comments

IV. Consent Agenda

Minutes of June 16, 2015 Regular Meeting

Attachments: 2015.06.16 Minutes

V. Financial Report

June Financial Report

Attachments: June Financial Report

VI. Directors Report

VII. Old Business

Work Authorization for the Airport Layout Plan

Attachments: Airport Layout Plan Update

VIII. New Business

EPA Letter

Attachments: EPA Proposed Letter of Correction 7-17-2015 Final

X. Adjourn



Agenda Summary Sheet

Rutherford County Office
Building
289 N. Main Street
Rutherfordton, NC 28139

File #: ID 15-814, **Version:** 1

Meeting Date: July 21, 2015

Agenda Approval

Summary:

Agenda is presented to the Board for consideration.

Budget:

n/a

Contact Information:

Brooke Watson
Secretary to the Airport Authority
828-287-6061
airport@rutherfordcountync.gov

Recommended Motion:

Approve agenda.



Agenda Summary Sheet

Rutherford County Office
Building
289 N. Main Street
Rutherfordton, NC 28139

File #: ID 15-815, **Version:** 1

Meeting Date: July 21, 2015

Minutes of June 16, 2015 Regular Meeting

Summary:

Minutes of June 16, 2015 are attached for the Board's consideration.

Budget:

n/a

Contact Information:

Brooke Watson
Secretary to the Airport Authority
828-287-6061
airport@rutherfordcountync.gov

Recommended Motion:

Approve June minutes.



Rutherford County

Rutherford County Office Building
289 N. Main Street
Rutherfordton, NC 28139

Meeting Minutes Rutherford County Airport Authority

Tuesday, June 16, 2015

5:30 PM

I. Call To Order

Chairman Michael Benfield called the June 16, 2015 meeting of the Rutherford County Airport Authority to order.

Present: Chairman Michael Benfield, Alan Toney, Greg Lovelace and Bryan King

Absent: Vice Chairman Eddie Holland

II. Pledge of Allegiance

Chairman Michael Benfield led in the Pledge of Allegiance.

A. Agenda Approval

Member Bryan King moved to approve the agenda and Member Alan Toney seconded.

Ayes: Chairman Benfield, Lovelace, King, and Toney

Noes: None

Absent: Vice Chairman Eddie Holland

III. Public Comments

None.

IV. Consent Agenda

Member Bryan King moved to approve the Minutes of May 19, 2015 Regular Meeting and Member Alan Toney seconded.

Ayes: Chairman Benfield, Lovelace, King, and Toney

Noes: None

Absent: Vice Chairman Eddie Hollan

V. Financial Report

Airport Director Randy Patterson reported on the revenues and expenditures through May 2015. There were no questions about the financial report.

VI. Airport Operations Report

Airport Director Randy Patterson reported that airport assistant Mickey Cochran, attended an Eastern Aviation Quality Control training in Charlotte; where he received three different certificates which are renewed yearly. The fuel meters were recently calibrated by the NC Department of Agriculture without any issues.

VII. New Business

Member Greg Lovelace made a motion to approve the aircraft tractor tug as surplus and list on GovDeals and Member Brian King seconded.

Ayes: Chairman Benfield, Lovelace, King, and Toney

Noes: None

Absent: Vice Chairman Eddie Holland

After inquiring if the fire apparatus can be used for training with the fire departments or by the community college, Member Greg Lovelace made a motion to approve the fire apparatus as surplus, and list on GovDeals, and Member Brian King seconded.

Ayes: Chairman Benfield, Lovelace, King, and Toney

Noes: None

Absent: Vice Chairman Eddie Holland

Upon motion duly made by Member Greg Lovelace and seconded by Member Bryan King, it was unanimously passed that the Lease and Operations Agreement by and between Skyhawk Aviation, Inc. and the Rutherford Airport Authority be approved as presented and that the County Manager have the authority to make non-material changes to the agreement, if necessary, prior to execution.

Ayes: Chairman Benfield, Lovelace, King, and Toney

Noes: None

Absent: Vice Chairman Eddie Holland

Airport Director Randy Patterson reported that the airport layout plan is required by the Division of Aviation and needs to be updated every five years.

County Manager Steve Garrison reported that the airport layout plan may be funded by grant money.

Jimmy Luther with WK Dickson will present the airport layout plan at the July meeting.

X. Adjourn

Member Bryan King moved to adjourn and Member Alan Toney seconded.

Ayes: Chairman Benfield, Lovelace, King, and Toney

Noes: None

Absent: Vice Chairman Eddie Holland

Chairman, Airport Authority

Vice Chairman, Airport Authority

Attest:

Secretary to the Airport Authority



Agenda Summary Sheet

Rutherford County Office
Building
289 N. Main Street
Rutherfordton, NC 28139

File #: ID 15-816, **Version:** 1

Meeting Date: July 21, 2015

June Financial Report

Summary:

The financial report presented to the Board for review.

Budget:

n/a

Contact Information:

Randy Patterson
Airport Director
828-288-4017
randy.patterson@rutherfordcountync.gov

Recommended Motion:

Information only.

RUTHERFORD COUNTY
Airport - Revenue and Expense
Report dates 07/01/2014 - thru - 06/30/2015

Account Number	Account Description	Amended Budget	Period Activity 05/01/2015 to 05/31/2015	Fiscal Year to Date 07/01/2014 to 06/30/2015	Encumbrances	Available Budget
13-3453-410-01-000	AIRPORT FUEL SALES	420,000.00	-36,055.54	-367,973.78	0.00	52,026.22
13-3453-800-00-000	AIRPORT MISCELLANEOUS REVENUES	0.00	0.00	-121.00	0.00	-121.00
AIRPORT		420,000.00	-36,055.54	-368,094.78	0.00	51,905.22
13-3834-800-01-000	RENTS-AIRPORT	18,400.00	-6,187.27	-32,692.39	0.00	-14,292.39
MISCELLANEOUS REVENUE RENTS		18,400.00	-6,187.27	-32,692.39	0.00	-14,292.39
13-3980-980-10-000	CONTRIBUTION FROM GENERAL FUND	80,374.00	0.00	0.00	0.00	80,374.00
TRANSFERS FROM OTHER FUNDS		80,374.00	0.00	0.00	0.00	80,374.00
Total Revenue		518,774.00	-42,242.81	-400,787.17	0.00	117,986.83
13-4101-181-00-000	F I C A	0.00	0.00	0.00	0.00	0.00
13-4101-181-01-000	MEDICARE FICA 1.45%	0.00	0.00	0.00	0.00	0.00
13-4101-182-00-000	RETIREMENT EMPLOYER	0.00	0.00	0.00	0.00	0.00
13-4101-182-01-000	401K EMPLOYER	0.00	0.00	0.00	0.00	0.00
13-4101-183-01-000	LIFE & DISABILITY INS EMPLOYER	0.00	-2.20	0.00	0.00	0.00
13-4101-189-01-000	CAFETERIA ADMINISTRATIVE FEE	0.00	-0.50	0.00	0.00	0.00
13-4101-298-01-000	STATE SALES TAX 4.5%	0.00	15.52	396.66	0.00	-396.66
13-4101-298-03-000	COUNTY SALES TAX 2% & 2.5%	0.00	6.54	176.07	0.00	-176.07
CLEARING ACCOUNTS		0.00	19.36	572.73	0.00	-572.73
13-4530-121-00-000	AIRPORT SALARIES REGULAR	38,783.00	2,931.19	39,776.90	0.00	-993.90
13-4530-122-00-000	AIRPORT SALARIES OVERTIME	0.00	0.00	724.45	0.00	-724.45
13-4530-126-00-000	SALARIES TEMPORARY PART-TIME	28,834.00	1,387.29	24,832.15	0.00	4,001.85
13-4530-181-00-000	F I C A	4,219.00	225.04	3,644.12	0.00	574.88
13-4530-181-01-000	MEDICARE FICA	986.00	52.62	852.24	0.00	133.76
13-4530-182-00-000	RETIREMENT	4,980.00	518.46	7,026.45	0.00	-2,046.45
13-4530-182-01-000	NC RETIREMENT 401K	1,260.00	95.27	1,185.07	0.00	74.93
13-4530-183-00-000	HEALTH AND LIFE INSURANCE	6,461.00	526.07	5,267.16	0.00	1,193.84
13-4530-183-01-000	EMPLOYEE EVALUATIONS	100.00	0.00	0.00	0.00	100.00
13-4530-186-00-000	WORKMENS COMPENSATION	1,677.00	0.00	3,816.00	0.00	-2,139.00
13-4530-189-01-000	OTHER FRINGE BENEFITS	0.00	0.50	5.07	0.00	-5.07
13-4530-192-00-000	PROFESSIONAL SERVICES LEGAL	9,000.00	300.00	17,662.01	0.00	-8,662.01
13-4530-192-01-000	PROFESSIONAL SERVICES OTHER	0.00	0.00	4,310.00	0.00	-4,310.00
13-4530-199-00-000	PETTY CASH OVER/SHORT	0.00	0.00	91.26	0.00	-91.26
13-4530-251-01-000	AV FUEL PURCHASES	350,000.00	28,446.94	304,062.69	0.00	45,937.31
13-4530-260-00-000	OFFICE SUPPLIES	1,493.00	0.00	1,390.04	0.00	102.96
13-4530-260-02-000	SUPPLIES	2,000.00	10.01	1,341.06	0.00	658.94

RUTHERFORD COUNTY
Airport - Revenue and Expense
Report dates 07/01/2014 - thru - 06/30/2015

Account Number	Account Description	Amended Budget	Period	Fiscal Year	Encumbrances	Available Budget
			Activity 05/01/2015 to 05/31/2015	to Date 07/01/2014 to 06/30/2015		
13-4530-299-00-000	PUBLIC RELATIONS	500.00	0.00	231.69	0.00	268.31
13-4530-311-00-000	TRAVEL/EXPENSE REIMBURSEMENT	300.00	6.90	1,011.64	0.00	-711.64
13-4530-321-00-000	TELEPHONE	1,800.00	573.89	3,021.40	0.00	-1,221.40
13-4530-325-00-000	POSTAGE	75.00	0.00	45.88	0.00	29.12
13-4530-331-00-000	UTILITIES SEWER WATER ELECTRIC	7,500.00	525.07	7,837.99	0.00	-337.99
13-4530-351-00-000	REPAIRS & MAINT AIRPORT	11,000.00	53.67	9,897.26	0.00	1,102.74
13-4530-352-00-000	MAINTENANCE TO EQUIPMENT	8,000.00	215.71	4,467.58	0.00	3,532.42
13-4530-353-00-000	MAINTENANCE TO VEHICLES	1,000.00	270.07	2,076.65	0.00	-1,076.65
13-4530-370-00-000	ADVERTISING	500.00	0.00	863.87	0.00	-363.87
13-4530-440-00-000	SERVICE & MAINTENANCE CONTRACTS	30,000.00	6,789.00	35,564.00	0.00	-5,564.00
13-4530-451-00-000	PEROPERTY/OPERATIONS INSURANCE	7,949.00	0.00	4,211.00	0.00	3,738.00
13-4530-491-00-000	DUES & SUBSCRIPTION	350.00	0.00	470.50	0.00	-120.50
13-4530-980-16-000	SAN SERVER UPGRADE ALLOCATION	7.00	0.00	0.00	0.00	7.00
AIRPORT		518,774.00	42,927.70	485,686.13	0.00	33,087.87
Total Expense		518,774.00	42,947.06	486,258.86	0.00	32,515.14
Airport Fund		0.00	704.25	85,471.69	0.00	85,471.69



Agenda Summary Sheet

Rutherford County Office
Building
289 N. Main Street
Rutherfordton, NC 28139

File #: ID 15-818, **Version:** 1

Meeting Date: July 21, 2015

Work Authorization for the Airport Layout Plan

Summary:

The information for the airport layout plan is presented for the Board's consideration.

Budget:

n/a

Contact Information:

Jimmy Luther
WK Dickson & Co., Inc.
jluther@wkdickson.com

Recommended Motion:

Approve the work authorization for the airport layout plan.

**RUTHERFORD COUNTY AIRPORT AUTHORITY
WORK AUTHORIZATION 3**

**Airport Layout Plan Update
July 21, 2015**

**Contract for Professional Services
March 8, 2011**

Project Description

Rutherford County Airport Authority have established an objective of creating a planning document that provides the tools needed to guide them through proper development of the Airport for the next 20 year planning period. The Airport Authority has determined that an update to their existing Airport Layout Plan can meet this objective.

The CONSULTANT proposes to provide the service of updating this planning document and submits a proposal to complete an Airport Layout Plan with the following tasks in order to provide the best possible near and long-term solution to developing the Rutherford County Airport.

Scope of Services

See Attachment A

Deliverables

1. The CONSULTANT will provide copies to the OWNER, NCDOA and FAA, of drawings and documents produced under this Work Authorization. Electronic copies, in pdf and/or AutoCAD format will be made available upon request to any of these parties.
2. Copies for grant applications, agreements and reimbursements.

Fee Schedule

The OWNER will pay, and the CONSULTANT agrees to accept as full compensation for services under this Work Authorization a Lump sum fee of One Hundred Seventy Seven Thousand Eighty Dollars \$177,080.



W.K. Dickson & Co., Inc.

Owner:

Rutherford County Airport Authority

Chairman

Consultant:

W.K. Dickson & Co., Inc.

Brian L. Tripp, PE, BCEE
Vice President

This instrument has been pre-audited in the manner required by local government and fiscal control.



Rutherford County (Marchman Field) Airport – Rutherfordton, NC
AIRPORT LAYOUT PLAN UPDATE
SCOPE OF WORK

July 21, 2015

INTRODUCTION

Rutherford County has established an objective of creating a planning document that provides the tools needed to guide them through proper development of the Rutherford County Airport (FQD) for the next 20 year planning period. The County has determined that an update to their existing Airport Layout Plan (ALP) can meet this objective. The last ALP update was created in 2005 and submitted to the North Carolina Division of Aviation for approval in August 2005, but WK Dickson and Rutherford County have no record that it was conditionally approved.

Future development of an existing airport requires a logical and systematic approach that integrates standard airport development criteria with creative design. Of utmost importance is the ability to identify the key issues for the particular airport and to develop an airport layout planning document that will address these key issues and provide a guide for growth of the facility.

W.K. Dickson & Co., Inc. proposes to provide the service of updating this planning document and submits a proposal to complete an Airport Layout Plan (in compliance with FAA AC 150/5070-6B, latest change) with the following tasks in order to provide the best possible near and long-term solution to developing the Rutherford County Airport.

PHASE I - AIRPORT REQUIREMENT STUDIES

Task 1: Study Design:

Objective: To determine the contractual scope of services, schedule, and costs required to prepare the Update to the Rutherford County Airport Layout Plan (ALP).

Scope: The initial step in the planning process is to develop an acceptable study design. This study design includes the identification of study issues developed resulting from a review of available data, extracting those factors which are the impetus for the study, and derive specialized efforts to be carried out in association with the Plan.

Several issues identified as having importance to the future of the Airport include:

- ➔ General Aviation Activity Growth;
- ➔ Runway Length Needs;
- ➔ Approach and Minima Demands;
- ➔ Terminal Area Alternatives;

- ➔ Taxiway System Modification/Development;
- ➔ Airport Development Land Acquisition Needs.

Working closely with the County Officials and Airport Management, we propose to reach decisions concerning the projects end-product and final study format, including development of methodologies and evaluations. This may include formal and informal meetings to discuss scope and direction of objectives to the Sponsor. This final scope will address the criteria and policies framework in which the study is to be prepared.

All required federal and state forms will be prepared throughout the course of the Study, as a part of this Scope of Services.

Task Product: Establish the priorities of the Sponsor in the long term development of the Airport.

Task 2: Data Collection and Inventory:

Task 2 provides a background for developing future projects and needs at the airport that will ultimately be utilized in justifying any recommended development items.

Objective: Inventory and collection of data pertaining to the Study essential for determining existing services, constraints, and projecting future needs of the facility and ultimate completion of the Airport Layout Plan Update.

- A. **Socioeconomic Information:** Historic and projected information for the 20-year planning period, as may be readily available by local sources, will be assembled. Data includes:

- ➔ Population Statistics
 - historic
 - projected
- ➔ Land Use
 - existing
 - adopted and/or Community Transportation and Comprehensive Plans (if available)
 - zoning (if available and in place)

- B. **Aeronautical Study:** Inventory of aircraft based at the Airport, will be listed by category:

- ➔ Single Engine Piston

- ➔ Multi-Engine Piston
- ➔ Turbo-Prop
- ➔ Jet
- ➔ Rotorcraft
- ➔ Other

C. Existing Studies: Generally review existing studies which impact the development of this update, as may be available:

- ➔ Current Airport Layout Plans/Reports
- ➔ ALP Drawings
- ➔ Property Information
- ➔ State Airport System Plan Information
- ➔ National Plan for Integrated Airport Systems
- ➔ FAA Terminal Area Forecasts (TAF)

D. Airfield Inventory: Data on the existing airfield facilities and terminal area components of the airport will be collected. This will include:

- ➔ Runways (length, width, and strength)
- ➔ Taxiways (length, width, and strength)
- ➔ Space Allocation
 - based aircraft
 - itinerant aircraft
 - military aircraft, if any
- ➔ Airport Acreage
 - fee simple
 - easement
- ➔ Pavements
 - condition
 - type
- ➔ Geometric Standards and Approach Surfaces, including:
 - runway centerline to taxiway centerline
 - runway centerline to building restriction line
 - taxiway centerline to building restriction line
 - taxiway centerline to apron edge
 - Runway Safety Area, RPZ, OFA, OFZ, RAZ, RDZ
 - FAR Part 77 Approach Surfaces
 - TERPS Surfaces
 - Departure Surfaces

- ➔ Terminal Area
 - buildings by function/condition
 - access roads
 - apron areas, parking positions by type
 - tie-downs, anchors
 - hangars
 - * conventional
 - * maintenance
 - * office
 - * T-hangars
 - vehicular parking
- ➔ Lighting and NAVAIDS
 - runway lights
 - taxiway lights
 - VASI, PAPI, or PLASI
 - segmented circle/wind cone
 - NAVAIDS
 - REIL
 - obstruction lights
 - other components
- ➔ Specific geometric dimensions such as:
 - distance from apron to edge of taxiway
 - taxiway widths
 - access road length
- ➔ Aircraft
 - Based
 - * single-engine piston
 - * multi-engine piston
 - * turboprop
 - * other (helicopters)
 - Operations
 - * based, by type
 - * itinerant, by type
 - * rotorcraft and other
 - * existing large aircraft counts from FBO/management log
- ➔ Airspace
 - VFR or Instrument approaches
 - airfield communications
- ➔ Weather Data
 - wind roses (wind coverage)

- * VFR
- * IFR
- * All Weather

→ Interviews

--Meetings with Airport Management to gain knowledge of the Airport's operation.

Task Product: A data base regarding the airport and its service area would be developed for use throughout the Study. Additional data would be acquired from various sources including the County, the Local Governments, the FAA, and the State of North Carolina, as needed.

Sub-Task 2a: Aerial Photography and Photogrammetry:

Objective: Collect Aerial photogrammetry of the existing airport and inner runway approach zones (RAZs) up to 100' above each runway end elevation using the proposed approach slope, plus photogrammetric data of building elevations. Ground Control will be established by WK Dickson and Aerial Photography and Photogrammetry will be completed by a Greenman-Pedersen, Inc. per FAA AC's 150-5300 16A, 17C & 18B.

Such data provides information for planning and designing potential development projects under near existing site conditions and provides a basis for future obstruction mitigation and airspace configuration and development. Additionally, safety-critical data will be collected per FAA AC's 150-5300 16A, 17C & 18B to accommodate the FAA AGIS system and its requirements.

Sub-Task Product: Color aerial photograph and photogrammetric data at 1" = 400' scale with 2-foot ground elevation contours, of up to 600 acres (Airport property plus planned and existing inner runway approach zones). Photogrammetric data to be used to develop planimetrics of Airport and adjacent properties, for use in ALP Update sheets and other graphics as needed as well as compliance with FAA AGIS system.

Sub-Task 2b: As-Built Layout Plan:

Objective: An as-built layout plan that depicts existing facilities is critical to this ALP Update as an accurate baseline. Such data is needed to ensure that both current operations and future development is based on valid assumptions regarding the Airport and its vicinity.

Sub-Task Product: As-built layout drawings for up to 500 acres (Airport property plus adjacent parcels) will be compiled using data collected for photogrammetry, planimetric, obstructions, parcels, topography, and field survey and utilized in the ALP Update for the Airport Layout Plan sheet, and other required drawings of the Update. A meeting with Airport

Management, and his invitees, to discuss the project status and draft planning documents will be held. Aerial photogrammetry data will be collected per FAA AC 150-5300 16A, 17C & 18B at the beginning of this project for safety-critical features including NAVAIDs, runway attributes, obstructions as well as non safety-critical features such as terminal area pavement edges and buildings and provided for use during the project.

Task 3: Determination of Long Term Facilities Requirements:

Objective: Assimilate the data collected in Task 2 to derive an aeronautical demand for the 20-year time frame in 5, 10, and 20-year increments, of the plan update.

- A. **Forecasts:** Forecasts of activity would be presented/obtained to reflect current demand and activity trends.

Aviation forecasts will be extracted from data available from the NCDOA and FAA's TAF to assist the short, intermediate, and long-range planning of the airport and its facilities. These forecasts will be reviewed and adjusted to reflect current conditions at the Airport. Various forecast planning methods will be utilized including 'operations per based aircraft', 'national market analysis', 'regional market analysis', 'state market analysis', 'historic trend of operations', and any state available state system planning document data. The TAF will be used as a comparison only. A planning average will be developed based on the published forecast data, regression methodologies, State System Plan data, and applicable Regional data. Aviation forecasts would be presented for aviation activity as follows:

- ➔ Aircraft expected to be based at the Airport;
- ➔ Aircraft mix (by engine type, and number of engines);
- ➔ Determination of a Design Category of Aircraft;
- ➔ Aircraft operations (mix, total, itinerant, and peaking factors);
- ➔ Passengers, General Aviation, Air Taxi and comparison of historical vs. expected passenger data to determine Terminal Building needs and services that may be expected.

- B. **Facility Requirements:** Based on the Capacity analysis and FAA guidelines, the facilities required to meet expected demand levels would be determined. Facility requirements would be staged into short (5 years), intermediate (10 years), and long-range (20 years) requirements based upon the various years' forecasts. Requirements would be determined for the following elements:

- ➔ Airport Category

- Runways - length, width, strength, runway protection zones, approach slopes, configuration and alignment;
- Taxiways - width, strength, clearance, and alignment;
- Apron - size, strength, and number of tie-downs;
- Navigational aids – type and locations;
- Pavement Marking - approaches, runways, taxiways;
- Lighting;
- Terminal Area - terminal/administration building, service hangars, and storage hangars. Specific effort will be focused on the purpose and future requirements of the Terminal Building including recommended future uses;
- Vehicular parking; and,
- Military needs, if any.

Task 4: Rwy Ext. Justification Data Collection/Analysis:

Objective: Collect and analyze data that identifies the operators facility needs for at least the first 5-years. This will provide insight into the immediate need for any runway extensions, improved approaches, and other airside and terminal area needs.

Task Product: At the initiation of the ALP, the following tasks will be undertaken to ensure the results of the survey reflect reasonable understandings of the needs of the users, existing and anticipated future requirements for the Airport and to consider the potential impacts of the proposed projects, as well as other alternatives:

- A. **Develop and Distribute User Survey** – This task will create a logical user survey by using the ideals established in Tasks 1 and 2. A potential user database will be created through market research in order to establish contact information for individuals and companies with aircraft that could locate and/or operate at the Rutherford County Airport. The survey will be distributed via United States Postal Service (USPS) and follow-up phone calls will be made as necessary in order to realize a prompt and accurate response. All responses will be tabulated and formatted for analysis in subsequent phases of the ALP.
- B. **Identify and Quantify User Data** – The aviation user data will be quantified and summarized to provide a report on the needs found for the Airport. The analysis will estimate the market service potential including projected based aircraft and operations for the first five (5) years covered by the ALP.
- C. **Justification Conclusions** – The final phase of the justification will examine the findings and recommend development utilizing guidance from FAA AC 150/5325-4B (latest change) *Runway Length Requirements for Airport Design*.

PHASE II - AIRPORT PLANS

Following the completion of Phase I of the plan update, drawings depicting proposed development at the Airport will be prepared. Prior to finalization, appropriate alternatives will be presented to the Airport for consensus prior to proceeding. All drawings would conform to current FAA guidelines.

Task 5: Airport Layout Plan & Property Map:

Objective: Update the Airport Layout Plan incorporating the recommended facilities ascertained in Task 3 and a Property Map outlining properties currently owned and planned for acquisition.

The Airport Layout Plan (ALP) would display the Airport and immediate environs and include:

- Location and vicinity maps;
- Runway and Airport data tables;
- Wind information;
- Runway Protection Zones;
- Staging of development (existing and through ultimate);
- Runway/taxiway configurations;
- Apron areas;
- Buildings;
- Automobile parking;
- Access roads;
- Navigational Aids (on/off airport-visual & instrument);
- Geometric dimensions, and
- Airport property lines, property history and previous ownership, and any potential property acquisitions or releases.

The ALP will be prepared in accordance with ARP SOP 2.0 and the associated ALP Review Checklist will be utilized for QC and completeness review and submitted with the draft ALP.

The Property Map will be represented by a separate plan sheet that outlines the existing properties owned in fee simple and avigation easement, as well as properties planned for acquisition in either fee simple or avigation easement.

Task 6: Airport Airspace Drawing:

Objective: Update of the Airport Airspace Drawing relative to any criteria changes made requisite by accommodation of the long-term facilities requirements.

Scope: The Airport Airspace Drawing will display the imaginary surfaces associated with the Airport as designated in FAR Part 77, as amended. The plan will include the approach profiles and identify all obstructions to FAR Part 77 surfaces based on data collected in Task 2a.

Task Product: A new Airport Airspace Drawing will be produced and any obstructions will be identified.

Task 7: Inner Portion of the Approach Surface Drawings:

Objective: Update of the Inner Approach Surface Drawings that depict all necessary surfaces, including those additions planned through Task 3.

Scope: The Inner Approach Drawing will display the surfaces associated with Runway Protection Zones (RPZ), FAR Part 77 Approach Zones and TERPS Surfaces out to 100' above Airport elevation and based upon each runway end's approach slope. The Plan will include known obstructions, property line (if in its bounds), roads, railroads, their elevations, and clearances to approach surfaces and ground contours. The features will be shown in plan and profile at a suitable scale and will provide a tabular summary of obstruction details and proposed disposition.

Task Product: Updated Inner Portion of the Approach Surface Drawings with obstruction analysis results will be produced.

Sub-Task 7a: Aerial Topography and Obstruction Analysis:

Objective: An analysis of potential obstructions and development upon the existing topographic constraints is essential to this ALP Update. Such data provides information for planning and designing potential development projects under near existing site conditions and provides a basis for future obstruction mitigation and airspace configuration and development.

Sub-Task Product: Analysis will be performed for FAR Part 77, TERPS, and Departure Surfaces utilizing the aerial photogrammetry, topography, and obstruction data collected in Task 2a.

Task 8: Runway Departure Surface Drawings:

Objective: Update the Departure Surface Drawings that depict all necessary surfaces, including those additions planned through Task 3.

Scope: The Departure Surfaces will provide a geographic representation of known obstructions in plan and profile to the Surface based upon each runway end's existing or proposed departure end. The Plan will include known obstructions, property line (if in its bounds), roads, railroads, their elevations, if known, and clearances to the departure surfaces and ground contours. The features will be shown in plan and profile at a suitable scale and will provide a tabular summary of obstruction details and proposed disposition.

Task Product: Updated Departure Surface Drawings with obstruction analysis results will be produced.

Task 9: Terminal Area Plan(s):

Objective: Prepare a Terminal Area Plan(s) incorporating the recommended facilities ascertained in Task 3.

Complementing the Airport Layout Plan, drawing(s) of recommended terminal area facilities would be prepared and displayed in a fashion that outlines logical planning stages (I -- years 0-5, II -- years 6-10, and III -- years 11-20). The Terminal Area Plan(s) would display conceptual level design of the following elements:

- ➔ Building locations/general size;
- ➔ Aircraft parking apron - tie-downs, unloading area, fuel area, and temporary parking;
- ➔ Vehicular parking areas;
- ➔ Access and service roads, and Security fencing;
- ➔ Any lands to needed be purchased for the planned development.

Several alternatives to all or portions of the terminal area development may be created and discussed either formally or informally with the Airport Management and County Officials. A "best" development alternative will be discovered in this process.

Task Product: A recommended plan for the terminal area development exhibited in Terminal Area Plan Drawing(s).

Task 10: Land Use Plan and Recommendations:

Objective: 1. Document Airport noise contours of 65 DNL and higher generated from the *Integrated Noise Model* software program, using the Airport's ultimate airfield configuration and forecasts developed in Task 3. Also document general land uses in the vicinity of these contours. 2. Provide recommendations to the Local Government and the Airport on surrounding land uses that are compatible or incompatible with Airport Activity under the Airport's ultimate development plan, protected surfaces, and noise contours.

Task Product: Land Use Drawing depicting current Noise sensitive areas within the 65 DNL and general land use around the airport, as well as for the ultimate 20-year condition, Land uses outside the 65 DNL Noise Exposure Level will also be shown. Provide a list of recommended general land uses that are compatible with Airport activity and required FAA/FICON Noise Exposure Levels. Includes an inventory of existing land uses adjacent to the Airport and in the vicinity of the noise contours produced for the ALP, use any available existing comprehensive land use and zoning ordinances and maps, including any airport height and hazard ordinance to produce recommendations for surrounding land uses.

PHASE III - FINANCIAL PLAN/DOCUMENTATION

Based upon the proposed development for the short, intermediate, and long-range planning periods, cost estimates and general financing schemes would be prepared.

Task 11: Schedules of Development:

Objective: Formulate a recommended Staged plan for development of the recommended long-term facilities.

An analysis would be undertaken to determine priorities in developing proposed aviation facilities. From this analysis, staging of proposed development would be recommended based on expected demand levels. The staging sequence would be delineated on the airport plans.

Task Product: Staged depiction of recommended long-term facilities development.

Task 12: Estimates of Development Costs:

Objective: Prepare cost estimates for the recommended facilities development.

Cost estimates for the recommended facilities would be prepared to describe the range of capital funding requirements for each development stage. Estimates would be presented for specific airport development items such as:

- ➔ Land acquisition;
- ➔ Building;
- ➔ Runways;
- ➔ Taxiways;
- ➔ Aprons; and,
- ➔ Navigational aids.

These costs would be broken down by development stage utilizing the most recent construction costs available.

Task Product: Cost estimates by scenario stage years for the average range forecast of the recommended long-term facilities development.

Task 13: Documentation (Coordination/Document Prep):

Objective: Undertake a program of coordination and prepare an ALP Update report to accompany the drawing set and documenting the ALP Update process, findings, and recommendations.

This task consists of two sub-tasks, coordination and document preparation.

- A. Coordination – Three formal or informal meetings are anticipated in conjunction with the planning process. The first meeting may meet to discuss the effort underway and describe the results of the facility requirements phase. This meeting would likely be held at the time of a regularly scheduled meeting.

The second meeting may present the alternative development scenarios and solicit input from Airport Management/County Officials.

A third meeting may be a formal presentation of the plan's results. This meeting could be scheduled in conjunction with a regularly scheduled Airport or Local Government meeting.

- B. Report Preparation – A report documenting the Rutherford County Airport Layout Plan (ALP) Update will include a full analysis and recommendations for development. The rationale for any unusual design features and/or modifications to FAA Airport Design Standards (if applicable) will be listed and explained. It will include several chapters of documentation and analysis including:

- ➔ Introduction
- ➔ Airfield Inventory
- ➔ Aviation Demand Forecasts
- ➔ Facility Requirements
- ➔ Meteorology and Capacity Analysis
- ➔ Environmental Overview
- ➔ Airport Plans
- ➔ Financial Plan

The Report will constitute a “road map” for the development of the Airport, discussing the support for the documented recommendations.

- C. Documentation Distribution - Documentation of the Rutherford County Airport Layout Plan Update and ALP Report will be as follows:

- ➔ Six (6) copies of a Draft ALP Update Report including 11" x 17" versions of Airport Layout Plan Update Drawings for review by the Airport Management & County Officials, FAA, and NCDOA.
- ➔ Four (4) copies of a Draft full size (22" x 34") Airport Layout Plan Update Drawings for review by the Airport Management & County Officials, FAA, and NCDOA as needed. Electronic copies will be sent upon request to any of these parties.
- ➔ Up to eight (8) copies of the Final full size black-line ALP Update Plan prints to Rutherford County and NCDOA as needed.
- ➔ One (1) set of the Final Airport Layout Plan Report and Drawings on electronic media to NCDOA and Rutherford County.
- ➔ One (1) dry mounted Final ALP Plan Sheet Display Exhibit for use by the Airport Management & the County.

Task Product: Conducting and participation in meetings and coordination listed in Sub-task A and provision of the documentation as listed in Sub-tasks B & C.

Project Schedule: W.K. Dickson & Co., Inc. proposes to the following project schedule (subject to review agency response time):

- ➔ Draft Plans available for review and comment within seven months of notice to proceed;
- ➔ Draft Narrative Report available for review and comment within nine months of notice to proceed;
- ➔ Final Plans and Report submitted to Agencies and County for adoption within 12 months of notice to proceed.

April 7, 2015

2014090501

Joseph Barkevich, PE, AICP
W. K. Dickson & Co, Inc.
1320 Main Street, Suite 400
Columbia, SC 29201

RE: Proposal for Professional Photogrammetric Surveying and Mapping Services for Rutherford County Airport (FQD), Runway 1-19, near Rutherfordton, NC.

Joe:

Greenman-Pedersen, Inc., (GPI) is pleased to submit this proposal to W.K. Dickson & Co. Inc., (WKD), for providing airborne digital imagery acquisition with airborne GPS/IMU data collection, aero-triangulation, photogrammetric surveying and mapping, CAD, and digital ortho-rectification and mosaicing services in support for obtaining data delineating objects that may constitute an obstruction to aircraft navigation at the Rutherford County Airport (FQD), as well as provide an accurate base for aerial surveying services in supporting Airport Layout Plan (ALP) needs. Our project understating, management and communications, scope of services, schedule, compensation and terms of agreement are included herein.

Project Understanding

Pursuant to your request for Surveying Services to be performed for the above-mentioned project, please find our proposed scope of work and related fees herein. We understand that the purpose of this project is to accomplish and document as-built conditions for approximately 140 acres of the airport and surrounding property in providing a base model for an Airport Layout Plan (ALP) and supply data in 150/5300-18B format. This Aerial Survey Services provided herein by GPI for WKD will include and/or is for assisting with required ALP tasks:

- 1) Perform, document and report the tie to the NSRS per AC 150/5300-16A
- 2) Determine and validate runway length and width per AC 150/5300-18B
- 3) Determine Runway Profile at 50-ft stations per AC 150/5300-18B
- 4) Determine and document the horizontal extents of any stop ways per AC 150/5300-18B
- 5) Determine any stopway profiles per AC 150/5300-18B
- 6) Determine if the runway has any associated clearway per AC 150/5300-18B
- 7) Survey clearway to determine objects penetrating the slope per AC 150/5300-18B
- 8) Determine and document the taxiway intersection to threshold distance per AC 150/5300-18B
- 9) Determine or validate and document the position of navigational aids per AC 150/5300-18B
- 10) Perform or validate an airport airspace analysis per AC 150/5300-18B
- 11) Collect or validate and document airport planimetric data per AC 150/5300-18B
- 12) Perform or validate a topographic survey per AC 150/5300-18B
- 13) Collect and document runway and taxiway lighting per AC 150/5300-18B
- 14) Collect and document cultural and natural features of landmark value per AC 150/5300-18B
- 15) Collect position and type of runway and taxiway markings per AC 150/5300-18B
- 16) Locate, collect and document photo ID points per AC 150/5300-18B
- 17) Collect Imagery per AC 150/5300-17C

In addition, GPI will obtain all elevations of all airport features and above-ground structures and fixtures within the aforementioned delineated area(s) and include ground elevations data for use within the surface model.

A Professionally Licensed North Carolina Surveyor will be in responsible charge for all aspects of data retrieval, the submission and the upload of the survey to the FAA's Airports GIS website (FAA AGIS at <https://airports-gis.faa.gov/airportsgis/>). Additionally, the scope of our services will include all coordination with the National Geodetic Survey for approval, validation and verification of the final survey file. All data delivered will be in the localized coordinate system supplied by GPI, and adjusted to the North Carolina State Plane Coordinate System, NAD83(2011), NAVD88 (GEOID12A) and US Survey Feet unless otherwise requested by Airport Sponsor or Administrator.

The project will consist of 3D and 2D digital surveying and mapping services from airborne digital color imagery and localized ground control acquired by GPI for this project located in and around the Rutherford County Airport, North Carolina in 2015. The data will conform to WKD's design specifications and as provided in FAA Advisory Circulars AC 150/5300-16A, AC 150/5300-17C, and AC 150/5300-18B Change 1 for runways with Vertical Guidance. The survey, CAD, and mapping data will be collected and delivered in Microstation v8i, Autocad and/or ESRI ArcGIS; the image data will be delivered in TIF/TFW, MrSID and/or ECW formats and uploaded into the FAA AGIS for submittal and review by the Airport Sponsor. The project data per Table 2-1, Survey Requirements Matrix, for an Airport Layout Plan (ALP) will be collected, surveyed, processed and delivered to WKD in a cost effective and timely manner for both obstruction and instrument procedure development to occur.

Project Management and Communication

Communication with WDK, Airport Design Engineers, FAA officials, Airport Sponsor and local airport representatives/personnel will be through GPI's program and production manager, Timothy S. Schall. Timothy will be the point-of-contact (POC) for all contractual issues, negotiations and change orders, as well as for the technical management duties for the production team's day-to-day responsibilities. Timothy can be contacted at:

Greenman-Pedersen, Inc.
Attn: Timothy S. Schall, PLS, PPS, CP
7870 Thorndike Road
Greensboro, NC 27409

336-907-7114 (Phone)
336-382-7205 (Mobile)
980-225-0336 (Fax)
tschall@gpinet.com

PROJECT LIMITS

The project limits for FQD are shown on the attached exhibits; it includes all of the VG approach surfaces for runway 1-19 and the designated airport property.

SCOPE OF SERVICES

The scope of services for this project consists of an airborne survey for FQD, including surrounding areas as outlined in the flight and control diagram. GPI anticipates the following specific tasks of work to be completed for this project:

Task 1 Flight and Control Planning

GPI will provide WKD with a finalized flight and control diagram prior to the project's commencement. This flight and control diagram will consist of a detailed flight plan for the use of a Leica RC-30 analog camera or DMC II digital camera with a Track Air flight management system. The control point locations identified on the flight and control plan will consist of locations of potential, existing NGS/NCGS monuments and additional control station required to adequately support the entire photo block to the accuracies needed within the final products. A copy of the flight and control plans will be uploaded to the FAA AGIS for review and acceptance by the Airport Sponsor and FAA personnel as provided in the Statement of Work (SOW) for Surveying Services per AC 150/5300-18B. Afterwards, a sufficient number of copies of the flight and control diagram will be delivered to WKD so that you and air traffic control personnel are properly aware of the mission outline at the time of flight.

Task 2 Aerial Targeting, Horizontal and/or Vertical Control Survey



All existing horizontal and vertical control monuments in and around the FQD suitable for use in this project will be located and targeted prior to the aerial imagery mission(s). If additional ground control locations are necessary for the project, then a Class "C" Control Survey (or better) will be accomplished by appropriate Global Position Survey (GPS) data collection methods and supplied by WKD to GPI. All data will be adjusted to and delivered in the North Carolina State Plane Coordinate System, NAD83 (NSRS 2011), NAVD88

(GEOID12A), and US Survey Feet, unless otherwise requested by the Airport Sponsor.

Point locations within the aerial imagery data for these control stations will consist of nylon targeting materials, paints, photo identifiable features and/or reflectors with proper contrasts and reflectivity properties suitable to render them easily detectable.

Supplemental Aerial and/or Ground Survey Requirements for ALP data per AC 150/5300-16A, -17B, -18B may include:

- ✦ The airport geodetic control validation of the existing airport PACS and SACS stations or establish temporary airport control according to the guidelines established in AC 150/5300-16A
- ✦ Additional Photo ID/ check pts (survey diagram attached)
- ✦ Collection of 50' vertical profiles for the runways being considered for the instrument approach
- ✦ Collection of the position, elevation, and where required the appropriate navigational aid perpendicular point of all electronic and visual navigational aids (NAVAIDS) located on the airport and associated with any current instrument approach servicing the airport
- ✦ Conversion of existing boundary data
- ✦ Complete map checks for feature attribute data and update the final map file attribution
- ✦ Although it is very unlikely to occur, there may be an obstacle or planimetric feature that will require collection in the field if unable to be collected photogrammetrically

Task 3 Digital Color Aerial Imagery Acquisition and Processing

GPI will accomplish the aerial flights utilizing ABGPS control and a precision aerial mapping camera during leaf-on conditions with natural color film, or with a precision digital imaging sensor at an altitude to acquire the base imagery at a resolution equal to or better than the natural color film flight outlined below:

- ➔ **Flight 1:** With weather permitting during leaf-on conditions, 8 Flight Lines with approximately 144 Exposures of color aerial imagery will be acquired at a 1"=800' negative scale (4,800' AGL) utilizing a minimum of 60% forward lap and 35% side lap coverage. Upon completion of the mission, the film and images will be reviewed for completeness and free of scratches, distortions, lint and other anomalies. This mission is to support ALP and to create, update or enhance current AC 150/5300-18B mapping data submissions for the ALP surveys.

GPI will closely monitor weather and air traffic conditions before and during the mission, and keep a good positive communication with air traffic control at all times during flight. During and upon completion of the mission, the flight crew will check their flight log data from our Track Air flight management system for complete assurance of adequate coverage of the project site.

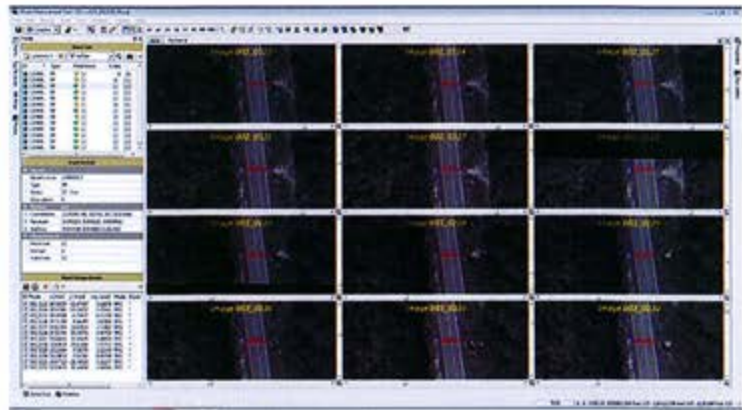
Upon completion of the film negative or digital image processing, the individual images will be reviewed for completeness and free of scratches, distortions, lint and other anomalies. All images of the entire photo block will be scanned at 12 to 14 microns for use in all mapping and digital orthoimagery production to insure all products contain the geospatial positional accuracy required for this site from the negative scale of photography and/or pixel resolution of the digital imagery obtained.

Task 4 Airborne LIDAR Data

GPI understands that there is suitable, existing NCFMP LIDAR DEM data which can be made available for use for any and/or all orthoimagery development and as a surface model base for determining object heights above ground level for any automated processes. This data will be reviewed, QA/QC, enhanced, and utilized in whole or at least in part for orthoimagery development and other mapping needs based upon the project needs.

Task 5 Digital Imagery Aero-Triangulation

Finalized ABGPS, digital images and survey control are collected to perform a bridging process of the aerial flight. GPI will utilize INPHO MATCH-AT software to perform a supervised auto-correlation for precise multi-ray tie points matching and integrated bundle adjustment.



MATCH-AT provides highly precise automatic digital aerial triangulation, based on the advanced and unique image processing algorithms by INPHO. Tie points are automatically collected in image areas best contributing to the strength and quality of the block. Additionally, digital measurements of all pass points, tie points, and control points (or any other required or desired point) will be reviewed, re-measured and adjusted as necessary for an adequate bundle adjustment and acquiring the overall desired sigma of the entire digital image block. These processes can be accomplished in both stereoscopic and monoscopic modes within the Match-AT software. During the adjustment, the final ABGPS EO data may be entered and used in the final block solution. Control targets that may have been moved or are not fitting the final adjustment will be identified and determined whether they are usable within the final bundle adjustment. If required, additional survey control may be established to ensure there are no areas of weakness in the control network. The aero-triangulation data is processed as a Fully Analytical Aerial Triangulation (FAAT) with accuracy criteria in accordance with NSRS and FGDC specifications. Once there is an acceptable final block adjustment, it will be recorded and used for all further imagery and mapping production update activities.

Task 6 LIDAR Data Post-Processing

Digital review of the existing NCFMP post-processed LIDAR data will be accomplished utilizing a DATEM SUMMIT Evolution Softcopy workstation with Airfield 3D capabilities for DATEM Capture software for ESRI or Microstation v8i. If there happen to be gaps in the LIDAR data extending from obstructions or other phenomena, we would then use photogrammetric processes to fill in those gaps.

Upon receipt of the data, we will check it to make sure it's in the correct location geographically, study the point spacing and see if the intended project limits are covered. Upon satisfaction, we will prepare the file for photogrammetric production processes.

Task 7 Digital Planimetric/Topographic Features

3-D Digital measurements of all planimetric and topographic features within the entire photo block(s) and within the airport boundary and airspace surface limits will be surveyed and mapped utilizing a DATUM SUMMIT Evolution Softcopy workstation with Airfield 3D capabilities for DATUM Capture software for ESRI and Microstation v8i. All topographic spot elevations or polygons for outlining obstruction surfaces will be generated and reviewed in a 3D viewing stereo-workstation capable of visualizing both image and point data sets simultaneously.

Obstructions to navigation will constitute any object:

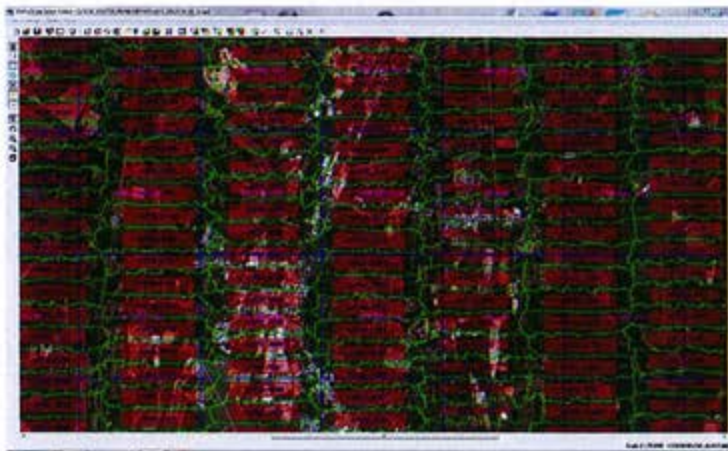
- 500 feet or more above ground level at object site
- penetrating any imaginary surface as a function of the precision of the runway per -18B, 2.7.1.1 and 2.7.1.2
- penetrating the terminal obstacle clearance area
- penetrating the enroute obstacle clearance area per -18B, 2.7.1.1 and 2.7.1.2

Mapping Products:

- Flight 1 - 1" = 800' imagery
 - 2' contours for the airport and surrounding property for required for ALP
 - 0.5' pixel Color Digital Orthoimagery
 - 1" = 40' Planimetric Mapping for the airport and surrounding property for ALP
 - Limited Landmark Feature Mapping as outline in AC 150/5300-18B - 2.3.4
 - Obstruction obstacle mapping to update the VGPS, VGRPS and VCPCS Surfaces

All CAD services will be imported/exported, originated, reviewed, edited and/or modified utilizing Microstation v8i software. Each layer will conform to specifications as required for use by WKD personnel. Any data supplied to GPI from previously collected projects will be reviewed to see if it meets the specified standards for this project prior to inclusion in any process for use.

Task 8 Digital Orthophotography (optional)



GPI will load all required images into a orthophoto project folder along with the finalized aero-triangulation results. Then, each individual image of the entire photo block will be ortho-rectified at a 1.0-foot pixel resolution and/or 0.5-foot pixel resolution to a processed and reviewed digital surface model suitable for the overall image mosaic within GPI's INPHO OrthoMaster software. Within the OrthoMaster software, the rotation each image is verified for each flight strip, clipping boundaries if needed are introduced, and images are reviewed for

displacement, edge matching and overlap coverage to ensure no holes in the image data exist. All digital orthophotography tiles and mosaics for this project will be originated utilizing INPHO OrthoVista software.

All images will be loaded into a single image block for image analysis and production purposes. This will allow the OrthoVista to examine the overall quality and diversity of the histograms for each individual image. Slight variations along the seam edges during mosaic processing will be corrected as needed with algorithms designed to enhance the global tilting and radiometric for the overall project.

Seam lines are automatically selected by OrthoVista and interactively reviewed/QAQC within the Seam Editor to achieve best mosaic match results. The Project's tile schematic will be loaded into the orthophoto project and all images will be reviewed for completeness, distortions, color balancing and other mosaic anomalies prior to being inserted into the final mosaic process. During the processing and writing of the final orthophoto image tiles, adaptive feathering techniques are introduced based upon the level of image detail (rural, suburban, or urban) to render the image with no trace of seam line areas within the final image.

GPI will provide an image quality peer review prior to finalizing deliverables. Following the completion of the initial image adjustments described above, the radiometric corrections will be independently reviewed on a 10% sample of imagery. This will confirm that the imagery meets or exceeds the quality-oriented technical specifications required by WKD. Any discrepancies such as color balancing issues or rectification artifacts will be identified and addressed.

DELIVERABLES

Based on our understanding of WKD's requirements, GPI will provide the deliverables below in the formats noted as part of our scope of services. If additional deliverables are requested, or if deliverables are required to be delivered in alternate formats, those requests will be considered and offered as additional services.

<i>Deliverables for ALP Survey Services</i>	<i>Format(s)</i>	<i>Amount</i>
• Aero-Triangulation Report	PDF	1 each
• Final Planimetric CAD Data in 3D/2D at 1"=40'	DGN/DWG/ESRI	1 set each
• Final Topographic CAD Data in 3D/2D at 1"=40'	DGN/DWG/ESRI	1 set each
• Final Color digital image tiles at 0.5-foot pixel	TIF/TFW & MrSID	1 set each
• Final Color digital image mosaics at 0.5-foot pixel	TIF/TFW & MrSID	1 each
• Final Planimetric CAD Data in 3D/2D at 1"=100'	DGN/DWG/ESRI	1 set each
• Updated Obstruction CAD Data	DGN/DWG/ESRI	1 set each
• Original Aerial Imagery used for project per 150/5300-17C	TIF	1 set each
• Imagery Flight Report used per AC 150/5300-17C	PDF/XLS	1 set each
• Camera Calibration Report per AC 150/5300-17C	PDF/XLS	1 set each
• Interim Transmittals and Letters per AC 150/5300-17C	PDF/XLS	1 set each
• All CAD File Data in DWG/DGN and/or ESRI Format	DGN/DWG/ESRI	1 set each
• FGDC Compliant Metadata per 150/5300-18B		1 set each

All final digital files will be delivered on CD, DVD or uploaded via FTP to WKD. All ALP related deliverables will be made via the FAA AGIS (<https://airports-gis.faa.gov/airportsgis/>) as directed.

GENERAL REPORTING AND CONTACT WITH WKD AND FQD AIRPORT PERSONNEL

Close communication with WKD and Airport personnel will be conducted throughout the entire survey process, along with proper FAA reports and document submissions for the ALP & AS&AAA submittals. This includes personnel time and documentation to be provided for: all Project Reporting Phases, Survey Data Reports, Aerial Survey Operations, and Preparation and Deliverable Activities, along with obtaining the necessary approvals during each of these tasks as authorized by WKD.

ADDITIONAL SERVICES

Any services not reflected in the Scope of Services section of this Agreement, including but not limited to the following, are not included in this Agreement. Surveyor may elect to provide or coordinate these services, if requested, but they will be considered additional services.

These additional services can be performed as mutually agreed upon by the Client and Surveyor and documented by a written addendum to this Agreement. Additional Services include:

- Boundary and topographic surveys, including tree surveys
- Survey of off-site utilities, bridges or roadways
- Special easements / maps for common areas
- Special easements / maps for utility purposes
- Subsurface utility locating services and subsurface utility engineering (SUE) services
- Wetland delineation
- Wetland mapping
- Title Research/Title Reports
- ALTA surveys
- Off-site utility surveys
- Right of way / easement negotiations / acquisition
- Project schedule extensions beyond our control
- Providing project deliverables in formats other than those indicated

ACCURACY STANDARDS

All methods and procedures utilized for all services herein will be accomplished in accordance with and will conform to Federal Geographic Data Committee (FGDC) Geospatial Positioning Accuracy Standards (Chapter 3) for positional accuracy requirements for each image scale, unless otherwise specified. All data delivered will be in the localized coordinate system supplied by GPI, and adjusted to the North Carolina State Plane Coordinate System, NAD83(2011), NAVD88 (GEOID12A) and US Survey Feet. All aerial and field survey work will be undertaken and/or under the direct supervision of a professional surveyor or photogrammetric surveyor licensed in the state of North Carolina.

COMPENSATION AND BILLING

FIXED FEE

The work will be billed on a fixed price basis for the scope of work described and as outlined in any subsequent agreement made by purchase order from WKD with GPI based upon the scenario selected.

Phase 1 – Tasks 1 through 3.....\$ 8,480.00
Color Imagery Acquisition for 1"=800' Negative Scale Imagery (leaf-on) and digital imagery negative scanning at 12um; targeting, horizontal and vertical ground control (supplied by WKD)

Phase 2 – Tasks 4 through 6.....\$ 5,040.00
Digital Aero-Triangulation, Imagery and Remote Sensing Data processing

Phase 3 – Task 7 through 8.....\$31,490.00
1"=50' Scale ALP Planimetric/Topographic Mapping with 2' CI, Consist of digital planimetric/topographic data collection from the 1"=800' Negative Scale Imagery for the extended airport boundary, including runways, taxiways and ramp areas, and delivery of compliant data and reporting to FAA per ACs; digital data collection for the AS&AAA surfaces, and delivery of compliant data and reporting to FAA per ACs and their respective objectives/tasks; digital orthophotography at 0.5-ft or 1.0-ft pixel resolution (1"=800' scale imagery); and delivery of compliant data and reporting to FAA per ACs.

Total – Airport Layout Plan (ALP) 150/5300-18B compliant.....\$45,010.00

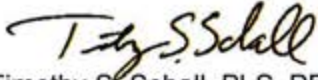
SCHEDULE OF SERVICES

We will perform the work described in the above Scope of Services as expeditiously as practical to meet a desired schedule (tentatively within 60-90 days from notice to proceed for the ALP Survey project).

We look forward to working with you on this project and appreciate this opportunity to serve WKD needs. If you have any questions or need additional information, please feel free to call us.

Best regards,

Greenman-Pedersen, Inc.



Timothy S. Schall, PLS, PPS, CP
Vice-President
Remote Sensing & Surveying

PROJECT TITLE: ALP-Update: Rutherford County Airport		DATE PREPARED: 07-21-15		AVIATION NUMBER:								
PREPARED BY: JAL		TIP NUMBER:		WBS NUMBER:								
TASK NUMBER	PHASE AND TASK DESCRIPTION	Employee Classifications										SUB-TOTAL
		Principal	Program Manager	Sr Project Manager	Project Manager	Sr Project Engineer	Project Engineer	Sr Civil Designer	Civil Designer	Cost Observer	Admin. Manager	
SPECIAL SERVICES												
PHASE - I AIRPORT REQUIREMENT STUDIES												
1	Study Design	6.00	10.00				12.00		6.00			34.00
2	Data Collection and Inventory	2.00	16.00				22.00		18.00			64.00
2a	Aerial Photography and Photogrammetry: (SEE EXPENSE TAB)											
2b	As-Built Layout Plan	2.00	10.00				16.00		28.00		2.00	58.00
3	Determination of Long Term Facilities Requirements	4.00	10.00				20.00		30.00		6.00	70.00
4	Rev Ext. Justification Data Collection/Analysis	8.00	24.00				36.00		14.00		24.00	106.00
	TOTAL WORKDAYS/CATEGORY:	22.00	70.00	0.00	0.00	0.00	106.00	0.00	96.00	0.00	42.00	336.00
	RATES PER HOUR:	\$77.10	\$60.26	\$56.81	\$51.88	\$44.56	\$38.63	\$35.65	\$32.35	\$35.00	\$26.78	
	PAYROLL BURDEN:	\$1,086.30	\$4,714.20	\$0.00	\$0.00	\$0.00	\$4,094.78	\$0.00	\$2,917.44	\$0.00	\$1,114.76	
	TOTAL WORK HOURS:	336.00										
	TOTAL PAYROLL BURDEN:	\$13,941.38										
	GENERAL OVERHEAD @ 169.20.00 %:	\$23,588.81										
	SUBTOTAL:	\$37,530.19										
	COMPENSATIVE FEE @ 9%:	\$3,377.72										
	Cost of Capital @ 0.43 %:	\$59.95										
	TOTAL:	\$40,967.86										
	DIRECT EXPENSES:	\$61,043.00										
	PRIME GRAND TOTAL:	\$102,010.86										
	Sub Consultant TOTAL:	\$0.00										
	GRAND TOTAL:	\$102,010.86										

From Expenses Tab

PROJECT TITLE: ALP Update - Butcherfield County Airport			DATE PREPARED: 07-21-2015			AVIATION NUMBER:							
PREPARED BY: JAL			TIP NUMBER:			WBS NUMBER:							
TASK NUMBER	PHASE AND TASK DESCRIPTION	Employee Classification										Sub-TOTAL	
		Principal	Program Manager	Sr Project Manager	Project Manager	Sr Project Engineer	Project Engineer	Sr Civil Designer	Civil Designer	Cost Observer	Admin. Manager		
SPECIAL SERVICES													
PHASE - II AIRPORT PLANS													
5	Airport Layout Plan/Property Map	6.00	30.00				52.00		60.00		10.00	158.00	
6	Airport Airspace Drawing	2.00	2.00				6.00		32.00		2.00	44.00	
7	Inner Portion of the Approach Surface Drawing	2.00	2.00				6.00		24.00		2.00	36.00	
7a	Aerial Topography and Obstruction Analysis	2.00	2.00				10.00		24.00		2.00	40.00	
8	Runway Departure Surface Plan(s)	2.00	2.00				12.00		24.00		2.00	42.00	
9	Terminal Area Plan(s)	4.00	14.00				22.00		28.00		4.00	72.00	
10	Land Use Plan	2.00	6.00				8.00		16.00		2.00	34.00	
TOTAL WORKDAYS/CATEGORY:		20.00	58.00	0.00	0.00	0.00	116.00	0.00	208.00	0.00	24.00	426.00	
RATES PER HOUR:		\$72.15	\$60.26	\$16.61	\$13.98	\$44.56	\$18.63	\$33.63	\$32.29	\$33.00	\$24.79		
PAYROLL BURDEN:			\$1,442.00		\$3,495.08	\$0.00	\$0.00	\$0.00	\$4,481.08	\$0.00	\$0.00	\$6,442.72	
TOTAL WORK HOURS:		426.00											
TOTAL PAYROLL BURDEN:			\$16,382.00										
GENERAL OVERHEAD @ 169.20.00 %:			\$27,718.34										
SUBTOTAL:			\$44,100.34										
COMPARATIVE FEE @ 9%:			\$3,969.03										
Cost of Capital @ 0.43 %:			\$70.44										
TOTAL:			\$48,139.82										
DIRECT EXPENSES:													
PRIME GRAND TOTAL:			\$48,139.82										
Sub Consultant TOTAL:			\$0.00										
GRAND TOTAL:			\$48,139.82										

From Expenses Tab

[illegible]

DIRECT EXPENSES

0

PREPARED BY: JAL

AVIATION NUMBER:

TIP NUMBER:

WBS NUMBER:

DATE PREPARED:

REVIEWED BY UNIT HEAD ON:

GENERAL PROJECT WORK:	ITEM	QTY	DESCRIPTION		UNIT COST	
	Travel:					
	Sedan	8	Trip(s) @	400 miles @	\$0.565	\$1,808.00
	Sedan		Trip(s) @	miles @	\$0.565	\$0.00
	Carry All		Trip(s) @	miles @	\$0.585	\$0.00
	Carry All		Trip(s) @	miles @	\$0.585	\$0.00
	Car Rental			days @	\$45.00	\$0.00
	Gas for Rental			miles @	\$0.200	\$0.00
	Per Diem:	3	Breakfast		\$8.20	\$24.60
		6	Lunch		\$10.70	\$64.20
		6	Dinner		\$18.40	\$110.40
		3	Lodging (on lump sum Incl. taxes)		\$73.50	\$220.50
	Reproduction:	375	8 1/2 x 11 Xerox Copies @		\$0.04	\$15.00
		60	11 x 17 Xerox Copies @		\$0.10	\$6.00
		2	Blueprints - 8 1/2 x 11 @		\$0.35	\$0.70
		150	Blueprints - 42 x 72 @		\$1.30	\$195.00
		1330	Bond - 8 1/2 x 11 @		\$0.42	\$558.60
			Bond - 34" x 68" @		\$3.50	\$0.00
		150	Vellum		\$3.00	\$450.00
			Stick-Ons		\$1.00	\$0.00
		40	Cover(s) @		\$0.50	\$20.00
		20	Binder(s) @		\$0.50	\$10.00
			Mylar - 8 1/2 x 11 @		\$5.90	\$0.00
			Mylar - 3' x 4' @		\$21.00	\$0.00
	Film and Developing:		Roll(s) @		\$20.00	\$0.00
			Subtotal			\$3,483.00
MAPS AND DOCUMENTS:	ITEM	QTY	DESCRIPTION		UNIT COST	
	County Tax Maps:		Map(s) @		\$7.00	\$0.00
	USGS Maps:		Map(s) @		\$7.00	\$0.00
			Subtotal			\$0.00
Miscellaneous Other	Item	Amount	Description		Cost Per	
	Aerial Photography, Photogram.		Subcontracted			\$0.00
	Topo, Obstr.	1			\$45,010.00	\$45,010.00
	Control Surveys	1			\$12,550.00	\$12,550.00
		0				\$0.00
			Subtotal			\$57,560.00
			TOTAL			\$61,043.00

* Sum of all plots



Agenda Summary Sheet

Rutherford County Office
Building
289 N. Main Street
Rutherfordton, NC 28139

File #: ID 15-817, **Version:** 1

Meeting Date: July 21, 2015

EPA Letter

Summary:

The EPA letter is presented to the Board for review.

Budget:

n/a

Contact Information:

Randy Patterson
Airport Director
828-288-4017
Randy.patterson@rutherfordcountync.gov

Recommended Motion:

Information only.



July 21, 2015

Mr. Ted Walden
Superfund Division
EPA Region 4
61 Forsyth St. SW
Atlanta, GA 30303

Dear Mr. Walden:

Please review our comments and Statement of Correction.

The inspection revealed the following deficiencies:

- 1) Failure to prepare a written Spill Prevention Control and Countermeasure (SPCC) Plan for the facility as required by 40 CFR § 112.3(a) in accordance with the guidelines for plan preparation at 40 CFR § 112.7:

General Response: *The requested items noted below may be located by using the 40 CFR 112 Cross Reference Chart found at the front of Appendix H of the SWPPP-SPCC Plan.*

- a) Plan did not discuss countermeasures for discharge discovery, response, and cleanup as required by 40 CFR § 112.7(a)(3)(iv);

Response *This information may be found in paragraph H.2.4 (Appendix H) of the plan.*

- b) Plan did not include a list with the phone numbers of individuals and agencies to contact in the event of a discharge as required by 40 CFR § 112.7(a)(3)(vi);

Response: *Contact names and numbers are recorded on SPCC Form 4. Blank copies of this form may be found in Appendix E and the most current copy of the completed form is filed in Appendix F of the plan and posted at appropriate locations near telephones throughout the airport.*

- c) Plan did not discuss the method, design, nor capacity of secondary containment for piping, tanker truck loading/unloading areas, nor for mobile refuelers as required by 40 CFR § 112.7(c) (Note that secondary containment in these areas can be active and/or passive in design and should address the typical failure mode and the most likely quantity of oil that would be discharged);

Response: *Table 1-1 found in Section 1 of the plan provides an inventory of all Bulk storage*

containers and the respective secondary containment. Paragraph B.3.5 in appendix B discusses the secondary containment requirements and sizing recommendations.

SWPPP Form 8 (BMP Implementation Log) in Appendix F, spells out recommended actions needed for compliance of the plan. Log entries include recommendations for the installation of secondary containment or appropriate spill prevention measures at each bulk container including the mobile refuelers. Verification that these measures are in place is conducted during each monthly site inspection and documented on SPCC Form 3.

- d) Plan did not discuss any applicable more stringent state rules and regulations as required by 40 CFR § 112.70);

Response: Paragraph H.2.3 states that the plan is in compliance with applicable Federal and State and local guidelines.

- e) Plan did not discuss the qualifications of personnel performing tests and inspections in accordance with industry standards as required by 40 CFR § 112.8(c)(6);

Response: Industry standard inspections of tanks and qualifications of inspectors is provided in paragraph H.3.3 of the plan found in Appendix H.

- f) Plan did not discuss liquid level sensing devices as required by 40 CFR § 112.8(c)(8);

Response: Paragraph H.3.8 discusses that liquid level sensing devices such as high-liquid level alarms or manual dipsticks shall be used during fuel transfers to ensure that sufficient capacity in storage containers (approximately 10% of total capacity) is left empty to account for thermal expansion.

- g) Plan did not discuss pipe terminal connections nor vehicle warning mechanisms as required by 40 CFR § 112.8(d)(2 & 5).

Response: Verbal warnings shall be given to vehicle operators entering into the airport regarding above ground piping. This is discussed in paragraph H.3.8.

Additional language as proposed below will be added to Paragraph H.3.8 to address pipe terminal connections.

“Piping Terminals within the fuel storage and pumping systems temporarily or permanently out of service shall be capped or blank-flanged.”

- 2) Failure to implement a SPCC Plan as required by 40 CFR § 112.3(a) in accordance with the guidelines for plan implementation at 40 CFR § 112.7 and/or § 112.8:

- a) Secondary containment is not provided for all bulk storage containers as required by 40 CFR § 112.8(c)(2);

Response: At the time of plan implementation, locations where secondary containment is required and was not present were identified and listed on SWPPP Form 8, BMP Implementation Log. Intent to implement these measures was recorded and included into the plan. The schedule for these improvements was not known at the time of plan implementation and is subject to available funding.

- b) Records of dike drainage events are not maintained as required by 40 CFR § 112.8(c)(3);

Response: *Proper procedures and documentation for inspecting and releasing rainwater stored in a diked area are outlined in paragraph A.1.7 (Appendix A). Blank inspection forms (SWPPP Form 12), which are used to document the release of diked water, may be found in Appendix E and completed forms should be filed in Appendix F for at least 5 years.*

- c) Records of inspections and tests are not maintained as required by 40 CFR § 112.7(e) and § 112.8(c)(6).

Response: *SWPPP Form 1 found in Appendix E should be completed annually and filed in Appendix F of the plan. This form is a comprehensive outline of all of the inspections, the associated forms, and the required frequency that is required to remain in compliance with State and Federal Regulations of the plan. Annual records showing ongoing maintenance of the SWPPP-SPCC should include all of the required inspection documents outlined on SWPPP Form 1.*

Technical Recommendation:

- Bulk storage containers must be permanently closed per the definition of *permanently closed* at 40 CFR § 112.2 for such containers to be exempt from the SPCC regulation.

Response: *Concur. Any bulk storage not in use should be “permanently closed” including a sign stating its closure and the date of closure as required in section 112.2 copied below.*

From 112.2:

Permanently closed means any container or facility for which:

- (1) All liquid and sludge has been removed from each container and connecting line; and*
- (2) All connecting lines and piping have been disconnected from the container and blanked off, all valves (except for ventilation valves) have been closed and locked, and conspicuous signs have been posted on each container stating that it is a permanently closed container and noting the date of closure*

Based on our concurrence with this technical recommendation, we worked with a local vendor to professionally remove two tanks (250 gallon steel above ground storage tank (AST) containing waste oil and a 250 gallon steel (AST) containing kerosene) on July 20, 2015 which are no longer in use located behind the maintenance hangar. A new, 280 gallon, double wall kerosene storage tank will be installed in place of the current tanks.

We trust we have addressed the deficiencies noted in your letter of June 11, 2015. It is my intent to work with our airport consultant W.K. Dickson to schedule a training session for all airport staff members in August of 2015 on the purpose, function and implementation of our SPCC plan. We will also incorporate any needed updates to the SPCC plan during this time. Please advise if our response is acceptable.

Sincerely,

Randy Patterson
Airport Director

Cc: Michael Benfield, Airport Authority Board Chairman
Steve Garrison, County Manager
Beth Miller, Attorney at Law